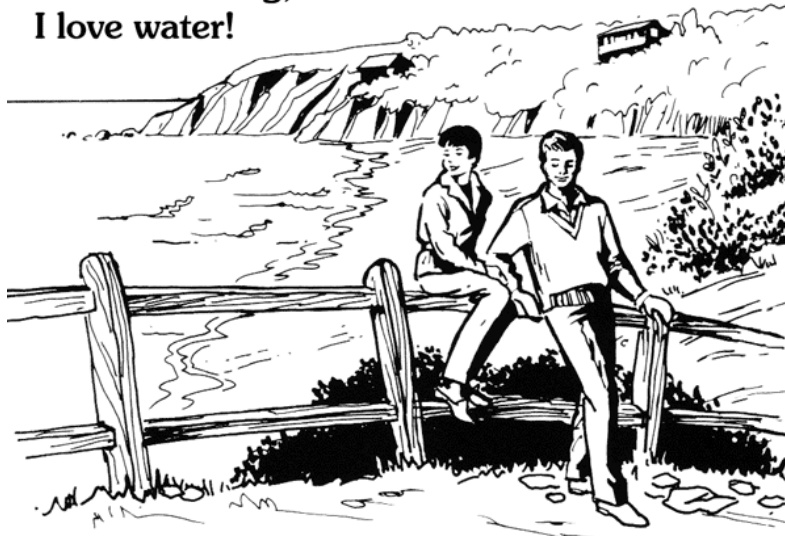


## Earth Science Study Guide (Weeks 1 & 2)

Your dad invented water?  
That's amazing, Tanner!  
I love water!



Married To The Sea.com

*All water has a perfect memory and is forever trying to get back to where it was.*

*--Toni Morrison*

*Water and air, the two essential fluids on which all life depends, have become global garbage cans.*

*--Jacques Yves Cousteau*

### **Overview**

*Water is an essential natural resource on planet Earth. All organisms on Earth depend on water for life. Its unique physical and chemical properties are important to the dynamics of Earth systems. Multiple factors affect the quality, availability, and distribution of Earth's water. As a limited natural resource, fresh water requires conservation efforts and thoughtful choices as human populations increase around the globe.*

### **Essential questions:**

- How can you make a difference when it comes to water conservation?
- How does the land, the air, and human transformation of the planet affect the availability of fresh water?

### **Week 1: Due March 31**

\_\_\_\_\_ 1. Read the overview and quotes with the class and mark them up.

- \_\_\_\_\_ 2. Make vocabulary cards or fill out vocabulary sheets for the following words: **precipitation, natural purification (re: water), reservoir, transpiration, aquifer, drought, irrigation, saline, caustic, outgassing, salts, tides.**
- \_\_\_\_\_ 3. Complete Sections 1 and 2 of the lab activity: What's My Environment?
- \_\_\_\_\_ 4. Present your research findings on your Utah plant and/or animal to the class. (Part 2 of What's My Environment?)
- \_\_\_\_\_ 5. Complete part III of What's My Environment? by turning in your colored transparency map attached (not stapled) to your question sheet.
- \_\_\_\_\_ 6. Discuss, as a class, your observations of the comparisons with your own map to Utah's three environments.
- \_\_\_\_\_ 7. Read and take notes on pp. 218-223 of the Earth Science textbook.
- \_\_\_\_\_ 8. Complete the questions 1-6 on p. 223 of the Earth Science textbook.
- \_\_\_\_\_ 9. Using the supplied data from inland and costal temperatures create a graph that accurately and usefully presents the data. What conclusions can I draw from my graph?

**Week 2: Due April 14**

- \_\_\_\_\_ 10. Read and take notes on pp. 231-236 of the Earth Science Textbook.
- \_\_\_\_\_ 11. Complete answers to questions 1-6 on p. 236 of the Earth Science Textbook.
- \_\_\_\_\_ 12. Manipulate, observe, and communicate your experience with the molecular model materials of H<sub>2</sub>O. I can describe and explain the concept of polarity.
- \_\_\_\_\_ 13. Review lesson: Cohesive and Adhesive properties of water.
- \_\_\_\_\_ 14. Participate in, ask questions, and complete the activity: Water on a Penny.
- \_\_\_\_\_ 15. Participate in, ask questions, and take notes on the Lesson: Groundwater using the Envision 2000 Simulator.
- \_\_\_\_\_ 16. Bring in 2 water samples from the same pond, river, stream, lake, or other natural outdoor source. You will use this sample to begin next Monday's lab: All About Algae

## Earth Science Study Guide (Weeks 3, 4, & 5)

### Overview

Water is an essential natural resource on planet Earth. All organisms on Earth depend on water for life. Its unique physical and chemical properties are important to the dynamics of Earth systems. Multiple factors affect the quality, availability, and distribution of Earth's water. As a limited natural resource, fresh water requires conservation efforts and thoughtful choices as human populations increase around the globe.



### Essential questions:

- How can you make a difference when it comes to water conservation?
- How does the land, the air, and human transformation of the planet affect the availability of fresh water?

### Week 3: Due April 21

- \_\_\_\_\_ 17. Participate in the lesson and begin the lab: All About Algae
- \_\_\_\_\_ 18. Participate in the lesson and read the handout on: Solubility and Methylated Mercury Pollution
- \_\_\_\_\_ 19. Complete the lab activity: Solubility

### Week 4: Due April 28

- \_\_\_\_\_ 20. Take the SAGE test (B1).

### Week 5: Due May 5

- \_\_\_\_\_ 21. Take the SAGE test (A1).

Name \_\_\_\_\_ Period: \_\_\_\_\_

Cycle 4 March 31 – May 21

\_\_\_\_\_ 22. Watch the Documentary: Billions in Change.

\_\_\_\_\_ 23. Participate in the Socratic Dialogue on the Documentary: Billions in Change. Be ready to answer the following questions: What are the ethical issues in this documentary? What technology is best and why? What can you do?

## Earth Science Study Guide

### INTERDEPENDENCE (Weeks 6 & 7)

**Overview**

*Water is an essential natural resource on planet Earth. All organisms on Earth depend on water for life. Its unique physical and chemical properties are important to the dynamics of Earth systems. Multiple factors affect the quality, availability, and distribution of Earth's water. As a limited natural resource, fresh water requires conservation efforts and thoughtful choices as human populations increase around the globe.*

**Essential questions:**

- How can you make a difference when it comes to water conservation?
- How does the land, the air, and human transformation of the planet affect the availability of fresh water?

**Week 6: Freshman Field Trip****Week 7: Due April 29**

\_\_\_\_\_ 24. Study for and Take the unit final.